California Health Policy and Data Advisory Commission
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Minutes
AB 524 Technical Advisory Commission
July 27, 2006

The meeting was called to order by Chairperson Jerry Royer at 10:00 a.m., at 1600 Ninth Street, Room 470, Sacramento, California. A quorum (defined as 50 percent plus one) was not in attendance, and action cannot be taken.

Present:	Absent:
Douglas Bagley	Marilyn Chow, R.N., DNSc,
Robert Brook, M.D.	Laura Gardner, M.D., M.P.H., Ph.D
Nancy Donaldson, R.N., DNSc	David Hayes-Bautista, Ph.D.
Maida Reavis Herbst, RHIA	Mark Hlatky, M.D.
Diana Petitti, M.D.	Jeffrey Rideout, M.D.
Jerry Royer, M.D., M.B.A., Chair	Laurie Sobel, J.D.
William Weil, M.D.	

Contractor:

Patrick Romano, MD, UC Davis Medical Center

CHPDAC Staff:

Kathleen Maestas, Acting Executive Director; Janna Brady, Retired Annuitant

OSHPD Staff: David Carlisle, MD, PhD, Director; Elizabeth Wied, Chief Counsel; Beth Herse, Staff Counsel; Michael Rodrian, Deputy Director, Healthcare Information Division; Jonathan Teague, Manager, Healthcare Information Resources Center; Joseph Parker, PhD, Manager, Outcomes Center; Holly Hoegh, Ph.D., Manager, Clinical Data Programs; and Mary Tran, PhD, Manager, Administrative Data Programs

Others in Attendance: Vito Genna, CHPDAC Chair

Approval of Minutes:

The minutes from the meeting of December 2, 2005, should reflect that absences of some persons were either not notified or received a notice too late to attend the meeting.

Acting Executive Director Report: Acting Executive Director Kathleen Maestas reported that a meeting was held with legal counsel and CHPDAC Chair, Vito Genna, about vacancies on the TAC to determine if members and their organizations are still interested in the current representation on the Committee.

Dr. Royer distributed a summary of the last meeting, which he thought was one of the most interesting meetings he has been involved in over the last few years. Two critical studies, the ICU study and expanding the administrative data sets, were reported on. There was a comment made that perhaps OSHPD should abandon all other studies in order to pursue the ICU topic.

Director's Report: Dr. Carlisle said with the addition of new staff, there is full leadership of the outcomes program now and that outcome reports are being diversified. The CABG report will soon be released, which specifies surgeon outcomes.

AB 1309 would basically make the Office a warehouse for healthcare workforce and healthcare professionals for the Health and Human Services Agency.

Healthcare Outcomes Project: Joseph Parker, Ph.D., Manager, Healthcare Outcomes Center

Holly Hoegh, Ph.D., is the new Manager for the Clinical Data Program, which produces the CABG and ICU outcomes reports. Dr. Hoegh formerly worked at the Department of Health Services' Cancer Surveillance Section and brings nearly 20 years of experience.

Mary Tran, Ph.D., is the new Manager of the Administrative Data Program, responsible for producing reports on heart attack, pneumonia, etc. She came from DHS' Bioterrorism Epidemiology Unit, has 15 years experience as an epidemiologist with DHS, and has clinical research experience in the academic/medical setting. She also is a registered nurse. `

OSHPD has contracts underway with UCD and UCSF researchers for CABG, hip fracture, maternal outcomes, and ICU. Dr. Andy Bindman at UCSF has a contract to produce a report on adding new data elements to the Patient Discharge Data and to do a validation of the Patient Discharge Data.

The AMI model was used to produce several reports, but was not updated over that period and no longer reflects clinical practice. Since the model was developed, "do not resuscitate (DNR)" within 12 hours and "condition present at admission (CPAA)" were added to the discharge dataset, which produces a better risk model. A contract was issued a couple of years ago on how best to update the model; findings will be discussed at the next meeting. It was found that coding of these two elements varied across hospitals and potentially

skews the results of the hospitals. This issue needs to be discussed more fully in the future.

A finding from a recent study replicated at OSHPD shows that there is a negative correlation between the hospital expected mortality rate for DNR="Yes"-coded patients and the percentage of patients that are coded with a DNR at a hospital. That is, the more patients coded as DNR="Yes" at a hospital, the lower their expected mortality.

Our current modeling approach, for example, the approach used in the CAP Report, is to apply two models, one that includes DNR and one does not include DNR. If a hospital is an outlier in both, it is rated publicly as an outlier. Recent clinical literature questions the use of DNR as a risk factor because of the above reasons and others. DNR should be discussed further at the next meeting.

Community Acquired Pneumonia: Mary Tran, Ph.D.

The draft report on community acquired pneumonia was released to hospitals for a 60-day review on June 15. Each hospital received its patient data set, specific statistics, and confidence interval chart that include all the hospitals. The statistics included total number of patients by year, observed death rate, expected death rate, and confidence intervals. The statewide rate shows the results by models using DNR and without. Hospitals receive all the original clinical data submitted in the Patient Discharge Data for their own patients, including the recoded variables used in the model and the resulting probability of death that is calculated using each of the two models. The 60-day period should end in August. A draft of the full public report will be available for review in September.

The presentation on CAP included a preview of the results from the 2002-2004 data, plus comparisons with previous analyses completed in 1996 (the Validation Study), 1997-1999 (not published), and 1999-2001. The 1999 to 2001 report is on the website. The number of hospitals reporting data decreased from 415 to 370 between 1997 and 2004. The decrease might be due to the fact that some hospitals have closed. Despite this, the number of cases of CAP has remained fairly stable. For persons that were admitted for pneumonia, the prevalence of a secondary diagnosis of congestive heart failure has increased, while the prevalence of septicemia has decreased. There has been no trend in prevalence of respiratory failure. The average risk-adjusted death rated in the 28 "worse" hospitals was 17%, twice as high as the average for the 25 "better" hospitals (8%). The performance of the model has remained unchanged, with a C-statisitc of about 0.8 across all reporting periodes.

It was suggested that OSHPD do further analyses before releasing the report to validate and give credibility to the modeling process. Dr. Petitti asked that this information be distributed before the next meeting. (1) Concerning the

prevalence of the secondary diagnoses listed above: The distribution of the prevalence of each of these risk factors and the names of the two hospitals with the highest prevalence for each of the three. (2) Concerning selection of cutpoints to define hospitals as outliers: The distribution of risk-adjusted death rates for each model and the cutpoints for selected percentiles.

Conclusions: Mortality rate for CAP cases remained about the same level; the number of CAP cases is stable, but the number of reporting hospitals is declining; the prevalence of leading risk factors such as congestive heart failure may be changing; adding DNR to the model moves about one third of outlier ratings to the expected level; the death rates for better hospitals are significantly better than that of worse hospitals, and the performance of the model has been stable.

The current model will be used once more, for the 2003-2005 data. The community acquired pneumonia model will be updated next year, and there is need for further discussion of DNR.

Nancy Donaldson suggested a missing conclusion; there appears to be profound differences between "better" and "worse" hospitals. The conclusions should address the process, the method, as well as the implications for healthcare quality. If there is confidence in the model, then the conclusions should speak to the significance of these findings for the health of Californians.

There is much clinical literature that supports a process-outcome relationship. OSHPD's budget cannot go much beyond producing validated outcome reports. Dr. Brook suggested if there is a resource problem, eliminate the coronary bypass surgery program (which is a mandated program).

Dr. Weil suggested that the California Hospital Association and California Medical Association should determine what is the best practice in the good hospitals and what is lacking in the poor hospitals. The relationship between the risk-adjusted rates for pneumonia and the actual rates is not understood. What influences the risk-adjusted rates more than anything else in all of OSHPD's outcome studies, is the actual raw rate.

Dr. Donaldson suggested presenting the information to raise discussion on the issue, not only method or process, but on the implications for the healthcare of Californians, and the opportunity for individual organizations, providers, payers and others to collaborate, to impact the unacceptable threat to the healthcare of Californians.

Large hospitals are more likely to be found statistically significantly different than the statewide because they have narrower confidence intervals. The executive summary and press release can speak to some of the importance of the findings. Dr. Brook suggested looking at a New York report done by Martin Shapiro

Maternal Outcomes Report Progress: Patrick Romano, M.D., UC Davis Medical Center

The study looked at perineal lacerations, third and fourth degree lacerations, as an adverse outcome of vaginal delivery. Postpartum complications related to maternal readmissions were also studied, as were cesarean delivery rates among nulliparous and multiparous women and those with a prior cesarean section.

The validation study showed a lot of variability in coding across hospitals, but by focusing on third or fourth degree laceration, the sensitivity and predictive values are very high. The weighted estimates showed some skewing, but the unweighted estimates are a better representation of what is going on across the set of hospitals included in the validation study. The data used were hospital discharge abstracts linked with birth certificates. Race and ethnicity have been shown in multiple studies to be important predictors of perineal lacerations. The most important variables were birth weight and parity. The larger the baby, the higher risk of perineal lacerations. The more babies a woman has had previously, the lower the risk of perineal lacerations.

The data are from 2000 to 2001 and a newer report will include data from 2003 to 2005. This later report will be publicly released in spring 2007.

This is the first study done by OSHPD where a consumer could actually select a hospital to go to. Dr. Brook urged reporting by hospital.

The risk adjusted model to predict readmissions of women with a prior cesarean show that maternal education lowers the risk of readmission; maternal race/ethnicity is associated with a higher risk of readmission; there is a higher risk in older women and in teenagers; and birth weight has a very strong relationship with the risk of readmission. The most important reasons for readmission were postpartum endometritis (infection of the uterus), postpartum hemorrhage, postpartum venous thrombosis, and postpartum urinary tract infections.

There are trade-offs. To avoid being readmitted, one would prefer a vaginal delivery. To avoid perineal laceration, one might opt for a cesarean delivery instead. In looking at a hospital and making a decision about childbirth, one needs to look at the cesarean rate, VBAC rate, perineal laceration rate and readmission rate together. In order to choose a hospital, one should also know something about neonatal or perinatal mortality rates adjusted for mother's education and birth weight, although these data were not generated as part of the contract with UC Davis. A matrix of hospitals for four different outcomes could be provided in the report. Hospitals generally need to have several hundred deliveries in order to be classified as statistical outliers.

Decisions need to be made on whether the 2000-2001 report should be released separately, in advance of the 2003-2005 report, and whether to release by hospital in an identified or blinded fashion.

Ron Williams produced a report based on birth certificates that looked at perinatal and neonatal mortality rates by hospital, risk adjusted for items on the birth certificates, using an adjustment to take into account the variation and sample size. This report was a tremendous motivator of quality improvement. Michael Rodrian said he would follow up with Ron Williams to determine why this report was discontinued. It was suggested that the neonatal mortality rate (30 days after birth) is a better outcome measure than perinatal mortality occurring during the birth admission.

Dr. Parker asked for guidance on whether risk-adjusted VBAC rates should be included and whether there should be a breakout and description labeling hospitals with high VBAC rates versus low VBAC rates, with explanation about trade-offs. Committee members responded that the report should include the more general subject of childbirth and choices in childbirth, including the information about differences in C-Section rates between hospitals and infant mortality. In the case of readmission rates, the information should be shown by hospital in a context that can be readily understood by a consumer. Determine whether the risk-adjusted neonatal mortality measure can be inserted into this report.

There are many hospitals with high crude rates of readmission and after risk adjusting these rates are still very high. This is probably due to processes that occurred during the hospital stay.

Some interesting things were found in the validation study. The sample was augmented with information from the clinical record to explore the adequacy of risk adjustment. Hospitals that tended to have more risk-adjusted readmissions also had more complications documented in the medical record before patients were discharged. It was found that when there was no nursing documentation of the condition of the wound at discharge, there was a higher risk of readmission. There were no differences between hospitals with high risk-adjusted readmission rates and those with low risk-adjusted readmission rates in antibiotic usage and number of pelvic exams done during labor. There was some difference related to nursing, especially nursing documentation. Hospitals are more likely to readmit when they have bad outcomes. Based on linked paid claims data from MediCal, hospitals that had more readmissions also had more ED visits, more outpatient hospital clinic visits, unexpected visits, and more office visits.

However, there was no difference in ED visits and outpatient hospital visits between UC hospitals with low risk-adjusted readmission rates and UC hospitals with high risk-adjusted readmission rates. Based on Medi-Cal claims, there was no systematic difference in the visit patterns at UC hospitals after discharge. Looking at antibiotic usage, it was found that among private

hospitals there were twice as many antibiotics prescribed on an outpatient basis. Medi-Cal claims are poorly coded, but these data still suggest that postpartum readmission rates may be a more valid indicator of quality among private hospitals than among UC hospitals.

There is some concern about differences in discharge practice patterns at teaching hospitals that may lead to more readmissions. If the report could help reduce readmissions by increasing awareness and causing some reflection on practice pattern variation, this would be a good thing.

There was consensus to publish the report, including all the measures discussed in detail. Hospitals will be identified if they are high or low on the risk-adjusted outcomes. There was consensus for a comparison of all the measures by hospital.

If there is no volume outcome relationship, then committee members agreed that one could use power analyses to determine a possible minimal volume cutoff for reporting of hospital performance ratings. There was consensus to include information on any volume outcome relationships, because these relationships should be exposed if hospital-specific results for small hospitals are statistically unreliable.

Work on the hip fracture report will continue after the OB report is completed.

Adjournment: The meeting adjourned at 2:07 p.m.

Pending Items:

1. Look at risk-adjusted rates of a hospital for the “better” and “worse” hospitals that changed toward expected for CAP.

2. Look at risk-adjusted death rates by quartiles and distribution for CAP.

3. Look at how to package the information in the CAP report for consumers and providers.